



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/972,947

10/10/2001

Johji Suzuki

NE-1065-US/kmt

4846

466

7590

01/25/2006

YOUNG & THOMPSON  
745 SOUTH 23RD STREET  
2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

LY, ANH VU H

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/972,947	SUZUKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Anh-Vu H. Ly	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 22-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-15, 18, 19 and 22-30 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This communication is in response to applicant's amendment filed November 01, 2005.

Claims 1-19 and 22-30 are pending.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by James et al (US Patent No. 6,728,821 B1). Hereinafter, referred to as James.

With respect to claims 1 and 16, James discloses a packet communication method for a network having a plurality of bus systems (Fig. 3, elements 408 and 410) interconnected by at least one bus bridge (Fig. 3, element 402), wherein at least one node is attached to each of said bus systems (Fig. 3, elements a.0, a.1, b.1, b.2, b.3), wherein said bus systems, said bridge and said node are in compliance to a serial bus standard (col. 5, lines 34-42), characterized in that said bus bridge establishes a connection between a first channel used in a first bus system (col. 8, lines 7-8, portal 808b acquires the isochronous resources, e.g., reserved channel, in IRM 825 and updates the oPCR within the talker 802) of said plurality of bus systems for transmission of

Art Unit: 2667

packets to a first multicast address and a second channel used in a second bus system (col. 8, lines 3-4, portal 808a acquires isochronous resources, e.g., reserved channel, from IRM 825 on its bus) of plurality of bus systems for transmission of packets to a second multicast address if the first and second multicast addresses are equal to each other and first and second channels have different channel identifiers from each other (col. 8, lines 8-12, the message is forwarded back to listener 804, which results in it being received by portal 808a. Portal 808a updates the iPCR so that it listens to the correct channel. Herein, the oPCR and iPCR, multicast addresses, are identified and matched, therefore, a connection established. Further, the reserved channels will have different channel identifiers since they reside on different buses).

With respect to claims 2 and 17, James discloses a packet communication method for a network having a plurality of bus systems (Fig. 3, elements 408 and 410) interconnected by at least one bus bridge (Fig. 3, element 402), wherein at least one node is attached to each of said bus systems (Fig. 3, elements a.0, a.1, b.1, b.2, b.3), wherein said bus systems, said bridge and said node are in compliance to a serial bus standard (col. 5, lines 34-42), characterized in that said at least one node attached to each of said plurality of bus systems, when initiating a multicast packet transmission to a multicast group of the bus system, acquires a channel to be used for said multicast packet transmission (col. 8, lines 7-10, portal 808b acquires the isochronous resources, e.g., channel number, in IRM 825 and updates the oPCR within the talker 802, initiated-multicasting node) and broadcasts a message pertaining to said channel (col. 8, lines 7-10 and Fig. 7, the message is then forwarded back toward one or more listeners 804); and said at least one bus bridge establishes a connection between channels acquired for different bus

Art Unit: 2667

systems when said message is received from each of said different bus systems (col. 8, lines 8-12, the message received by the portal 808a and iPCR is updated on listener 804 so that it listens to the correct channel or established connection. Herein, as illustrated in Fig. 7, the messages are received on different bus systems 805 and 807).

***Allowable Subject Matter***

3. Claims 3-15, 18-19, and 22-30 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or fairly suggest the first bus bridge acquires an interconnection channel if there is no node in the intermediate bus system participating in the multicast group and if two of the messages having an identical multicast address are received, one from the first bus system and the other from the second bus system, broadcasts a message pertaining to the interconnection channel and the multicast group and connects a first end of the interconnection channel to the channel acquired for the first bus system, as specified in independent claims 3 and 18.

The prior art does not teach or fairly suggest at least one node on each of the bus systems when operating as a receive-only node acquires a second channel if the first message is received when the bus system of the receive-only node has no node responsible for channel acquisition, and broadcasts a second message pertaining to the second channel and the multicast group, as specified in independent claims 4 and 19.

The prior art does not teach or fairly suggest wherein the first node broadcasting a first message pertaining to the acquired first channel and first multicast address; the second node

broadcasting a second message pertaining to the acquired second channel and second multicast address; and establishing a connection between two channels respectively identified by the received messages if the multicast addresses contained therein are equal to each other, as specified in independent claims 7, 9, 22, and 24.

The prior art does not teach or fairly suggest receiving, at the first bus bridge, the first and second messages and acquiring a third channel for transfer of packets on the intermediate bus system if the received first and second messages indicate that the multicast addresses contained therein are equal to each other, establishing a connection between a channel identified by the received first message and the acquired third channel, and broadcasting from the first bus bridge a third message pertaining to the third channel; receiving, at the second bus bridge, the first and second messages from the first and second nodes and subsequently receiving third message from the first bus bridge if the received first and second messages indicate that the multicast addresses contained therein are equal to each other, and establishing a connection between two channels respectively identified by the second and third messages, as specified in independent claims 8 and 23.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fujimori et al (US Patent No. 5,825,752) discloses local area network transferring data using isochronous and asynchronous channels.

Saito et al (US Patent No. 6,751,221 B1) discloses data transmitting node and network inter-connection node suitable for home network environment.

Art Unit: 2667

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Avl', is written over the signature line.

avl